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25X1

Copy 6 of 9

## PRELIMINARY REPORT ON THE FAILURE OF CORONA MISSION 9052

1. Analysis of flight data indicates that one of the solid rocket motors failed to ignite and also failed to separate from the THOR booster. The records show that certain telemetry voltages associated with the malfunctioning motor were absent from our telemetry data. The significance of this fact is that these telemetry circuits were connected to the motor through the same plug as the ignition and separation circuits. It is therefore assumed, at this time, that open circuits through the plug in question is the prime suspect as the cause of failure.

2. Ignition failure of the motor in question produced a roll rate which at approximately T plus 60 and for a period of about 5 seconds exceeded the capability of the control system-vernier engine combination. As a result, the roll axis was displaced approximately at 45 degrees. The affect of this condition was that subsequent Bell Telephone Laboratory System steering command to the vehicle caused the vehicle to respond in the correct fashion but the responses were in the wrong direction. The vehicle was destroyed by range safety at approximately T plus 125 seconds and it fell into the ocean. Ignition and separation of the other two solid motors and all other subsystems of the THOR agena combination appeared to function properly. Data on vibration, heating and shock are being analyzed in detail. First look results indicate that these areas were not appreciably affected by the addition of the solid rocket motors to the THOR booster.

3. The impact point for the vehicle is being obtained and this information will be forwarded. However, it is quite evident that the vehicle impacted in deep water and no security problems are indicated.

4. We are confident that we will be able to diagnose the precise cause of failure and we feel that there is no reason to delay our plans for Missions 8001 and 9053.

5. The above report was received at 0009Z on 2 March 1963.

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NRO Review Completed.

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